

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

INTELLECTUAL KEYSTONE
TECHNOLOGY LLC

Plaintiff,

v.

JOLED INC. and ASUSTEK COMPUTER
INC.

Defendants.

Civil Action No. 6:21-cv-00053-ADA

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Intellectual Keystone Technology LLC (“IKT”), by and through the undersigned attorneys, complains and alleges the following against Defendants JOLED Inc. (“JOLED”) and ASUSTeK Computer Inc. (“ASUSTeK”) (collectively, “Defendants”).

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.*

2. Plaintiff has filed this lawsuit to stop Defendants’ unlawful infringement of Plaintiff’s patented inventions and to obtain damages and other relief.

THE PARTIES

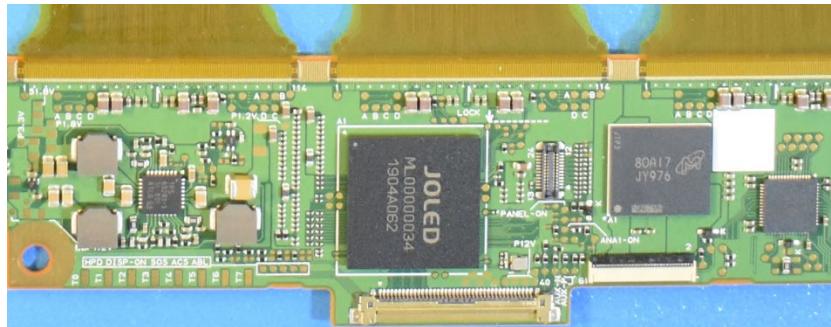
3. Intellectual Keystone Technology LLC (“IKT”) is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business at 2711 Centerville Road, Suite 400, Wilmington, Delaware 19808.

4. Upon information and belief, Defendant JOLED Inc. (“JOLED”) is a corporation organized and existing under the laws of Japan with its principal place of business located at MetLife Building 10F, Kandanishiki-cho 3-23, Chiyoda-ku, Tokyo, Japan, 101-0054. Upon information and belief, JOLED makes and sells OLED displays.

5. Upon information and belief, ASUSTeK Computer Inc. (“ASUSTeK”) is a corporation organized and existing under the laws of Taiwan with its principal place of business at 15 Li-Te Road, Beitou District, Taipei 112, Taiwan. Upon information and belief, ASUSTeK makes and sells computers, monitors, and other consumer electronic products, including products containing OLED displays supplied by JOLED.

6. Upon information and belief, Defendants use, sell, and/or offer for sale within the United States, and/or import into the United States products containing OLED displays made by JOLED that infringe one or more claims of U.S. Patent No. 7,342,177, U.S. Patent No. 7,439,943, and U.S. Patent No. 8,665,190. Such products, and the OLED displays made by JOLED, are hereinafter referred to as the “Accused Products.”

7. For example, upon information and belief, Defendants use, sell, and/or offer for sale within the United States, and/or import into the United States the ASUS ProArt PQ22UC 21.6-inch 4K HDR OLED Professional Monitor containing an OLED display supplied by JOLED. As shown in the image below, the ASUS ProArt Monitor includes a chip labeled “JOLED.”



Further, according to an announcement on JOLED's website dated January 5, 2018, a JOLED 21.6-inch 4K high-resolution OLED display panel "will be used for 'ASUS ProArt™ PQ22UC'" professional monitor:¹

JOLED Inc. (headquartered in Chiyoda-ku, Tokyo; President and Representative Director: Nobuhiro Higashiiroki) has started offering its 21.6-inch 4K high-resolution OLED panel samples produced using the printing method to ASUSTeK Computer Inc. (ASUS), a Taiwan-based international computer hardware and consumer electronics company.

JOLED's OLED display panel will be used for "ASUS ProArt™ PQ22UC," a professional monitor that ASUS plans to unveil at CES 2018.* ASUS states in their press release that "The top-of-the-line OLED technology with pure RGB stripes ensures color purity, and allows PQ22UC to deliver extremely high color saturation with 99% DCI-P3 coverage for greater color accuracy. ProArt PQ22UC also features true 10-bit color depth, achieving a contrast ratio of 1,000,000:1 for darker blacks and brighter whites. With a response time of up to 0.1ms, ProArt PQ22UC is the fastest monitor in the market and delivers outstanding, blur-free performance when displaying videos and other animated content with fast action."

8. Information attached to an ASUS ProArt PQ22UC monitor commercially available in Texas indicates that it is made by ASUSTeK Computer Inc.



¹ JOLED to Start Providing OLED Display Samples to ASUS, JOLED (Jan. 5, 2018), <https://www.j-oled.com/eng/customer/2018-1-05/>.

JURISDICTION AND VENUE

9. This Court has personal jurisdiction over Defendants. Defendant JOLED has established minimum contacts with the United States as a whole such that subjecting JOLED to jurisdiction in Texas will not offend traditional notions of fair play and substantial justice. Upon information and belief, JOLED has purposely availed itself of the laws and protections of the United States by knowingly supplying OLED displays for incorporation into products to be sold, offered for sale, and used in the United States, the state of Texas, and this District. The claims for infringement arise out of or relate to this activity. JOLED has also purposely availed itself of the laws and protections of Texas by filing a patent infringement lawsuit in this District.

10. Defendant ASUSTeK has established minimum contacts with the United States as a whole such that subjecting ASUSTeK to jurisdiction in Texas will not offend traditional notions of fair play and substantial justice. Upon information and belief, ASUSTeK has purposely availed itself of the laws and protections of the United States by knowingly supplying monitors and other electronics products to be sold, offered for sale, and used in the United States, the state of Texas, and in this District. ASUSTeK has targeted the United States by conducting regular business therein, and has placed and continues to place its products into the stream of commerce through an established distribution channel with the expectation and/or knowledge that they will be purchased by consumers in the United States, the state of Texas, and this District. ASUSTeK — directly or through intermediaries, subsidiaries, and/or agents — ships, distributes, offers for sale, and/or sells its products in the United States, the state of Texas, and this District. ASUSTeK has also voluntarily and purposefully placed one or more of its infringing products, as described below, into the stream of commerce with the knowledge or expectation that they will be purchased by consumers in the United States, the state of Texas, and

this District. Plaintiff's claim for patent infringement arises directly from and/or relates to this activity.

11. Venue is proper in this District under 28 U.S.C. §§ 1391(a)-(d) and 1400(b). JOLED and ASUSTeK are foreign corporations that do not reside in the United States, and may be sued in any judicial district pursuant to 28 U.S.C. § 1391(c)(3).

12. Defendants are jointly and severally liable for infringing U.S. Patent No. 7,342,177, U.S. Patent No. 7,439,943, and U.S. Patent No. 8,665,190 (the "Asserted Patents"). Defendants' liability stems from the same transaction or occurrence regarding the use, sale, and/or offer for sale in the United States and the importation into the United States of the Accused Products. Consequently, this action involves questions of law and fact common to all Defendants.

THE ASSERTED PATENTS

13. On March 11, 2008, the USPTO duly and lawfully issued U.S. Patent No. 7,342,177 B2 ("the '177 Patent"), entitled "Wiring Board, Electro-Optical Device and Electronic Instrument." A true and correct copy of the '177 Patent is attached as Exhibit 1.

14. Plaintiff owns, by assignment, all rights, title, and interest in the '177 Patent.

15. On October 21, 2008, the USPTO duly and lawfully issued U.S. Patent No. 7,439,943 B2 ("the '943 Patent"), entitled "Electro-Optical Device, Wiring Substrate, and Electronic Apparatus." A true and correct copy of the '943 Patent is attached as Exhibit 2.

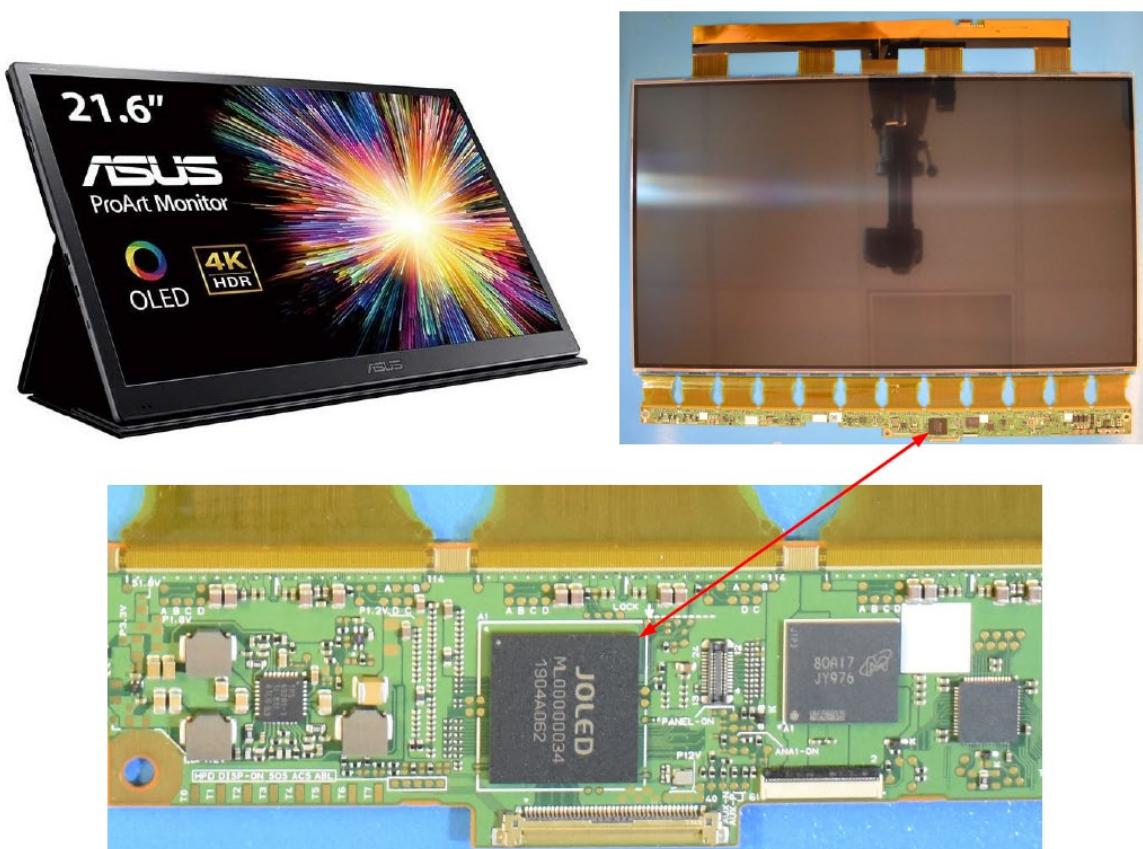
16. Plaintiff owns, by assignment, all rights, title, and interest in the '943 Patent.

17. On March 4, 2014, the USPTO duly and lawfully issued U.S. Patent No. 8,665,190 B2 ("the '190 Patent"), entitled "Electro-Optical Device, Wiring Substrate, and Electronic Apparatus." A true and correct copy of the '190 Patent is attached as Exhibit 3.

18. Plaintiff owns, by assignment, all rights, title, and interest in the '190 Patent.

THE ACCUSED PRODUCTS

19. The Accused Products are OLED displays made by JOLED and products incorporating them, including ASUS monitors manufactured by ASUSTeK containing such OLED displays, including but not limited to the ASUS ProArt PQ22UC 4K HDR OLED Professional Portable Monitor (“ProArt Monitor”), as shown below.²

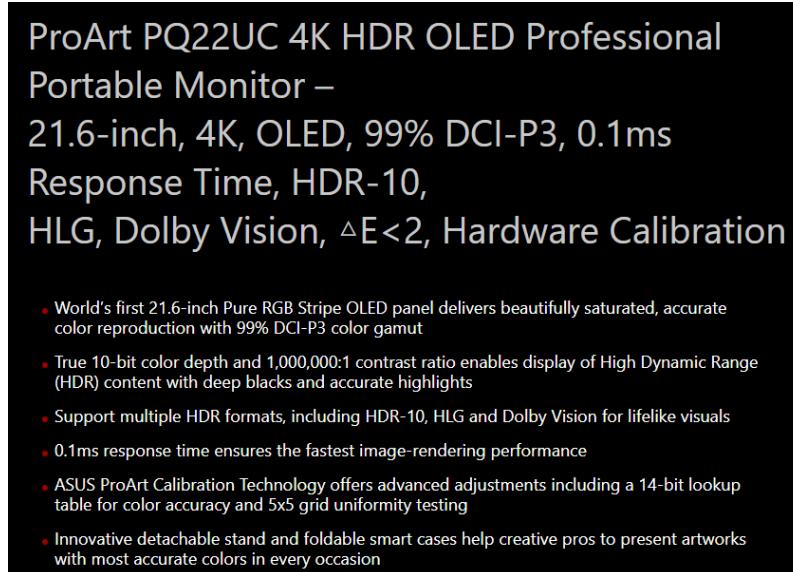


² See, e.g., OLED Monitors In 2020: The Current Market Status, DISPLAYNINJA (Nov. 23, 2020), <https://www.displayninja.com/best-oled-monitor/>; ASUS ProArt PQ22UC 4K OLED Monitor: £4699, ~\$5150, ANANDTECH (Mar. 22, 2019 5:00 PM EST), <https://www.anandtech.com/show/14123/asus-proart-pq22uc-4k-oled-monitor-5150-usd>; ASUS PQ22UC Professional 4K UHD OLED Screen, PCMonitors (Mar. 22, 2019), <https://pcmonitors.info/asus/asus-pq22uc-professional-4k-uhd-oled-screen/>; Asus Announces 4K HDR OLED Monitor, flatpanelshd (Jan. 07, 2018), <https://www.flatpanelshd.com/news.php?subaction=showfull&id=1515284612>.

20. Upon information and belief, ASUSTeK registered, owns, and operates the Asus.com US domain (<https://www.asus.com>) and the ASUS Online Store (<https://store.asus.com/us>). According to the ICANN database³, ASUSTeK Computer Inc. is the Registrant and Administrator of the “asus.com” website domain:

Contact Information
Registrant:
Name: 徐上綽 ARIES HSU
Organization: 華碩電腦股份有限公司 ASUSTeK COMPUTER INC.
Email: DNS_ADMIN@ASUS.COM
Mailing Address: 台北市北投區立德路15號 No. 15, Li-Te Rd., Peitou, Taipei, Taiwan, 112, TW
Administrative:
Name: 徐上綽 ARIES HSU
Organization: 華碩電腦股份有限公司 ASUSTeK COMPUTER INC.
Email: DNS_ADMIN@ASUS.COM
Mailing Address: 台北市北投區立德路15號 No. 15, Li-Te Rd., Peitou, Taipei, Taiwan, 112, TW

21. ASUSTeK advertises the ProArt Monitor on its US website (<http://www.asus.com/us>):⁴



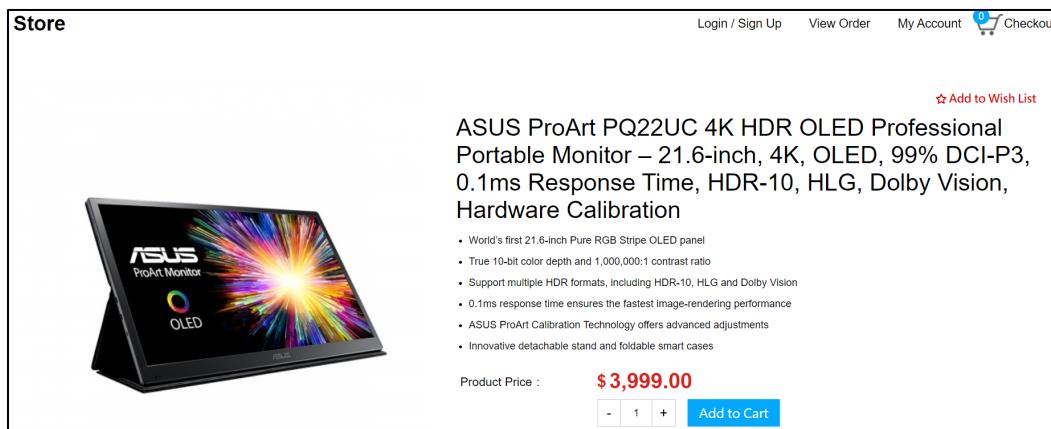
³ <https://lookup.icann.org/lookup>

⁴ <https://www.asus.com/us/Monitors/ProArt-PQ22UC/overview/>

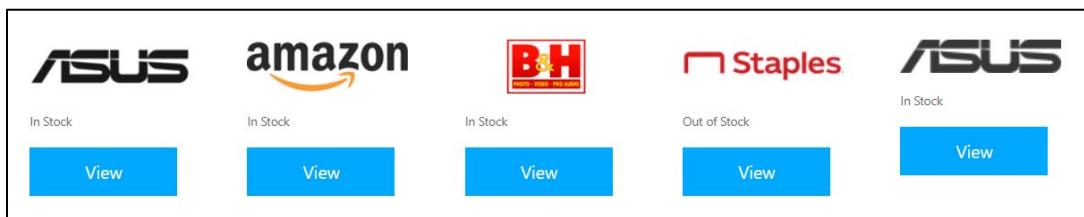
22. ASUS's US website highlights the OLED panel of the ProArt Monitor among its key features:⁵

- “21.6-inch Pure RGB Stripe OLED panel delivers beautifully saturated, accurate color reproduction.”
- “ProArt™ PQ22UC has a pure RGB Stripe OLED panel with billions of self-illuminating pixels that can be individually activated to reproduce truly lifelike pictures with deep blacks, natural colors and enhanced color contrast in high-luminance images.”

23. Upon information and belief, ASUSTeK offers to sell and sells the ProArt Monitor to consumers in the United States through its US website, store.asus.com:⁶



24. ASUS's US website also provides hyperlinks to retailers that sell the ProArt Monitor. For example, website users are directed to purchase the ProArt Monitor from the ASUS US Store, Amazon.com, B&H Photo Video, and Staples.com:⁷



⁵ *Id.*

⁶ <https://store.asus.com/us/item/201906AM130000002>

⁷ <https://www.asus.com/us/Monitors/ProArt-PQ22UC/wheretobuy/>

COUNT I - INFRINGEMENT OF THE '177 PATENT

25. Plaintiff hereby incorporates the allegations of Paragraphs 1 through 24 as fully set forth herein.

26. Upon information and belief, Defendant ASUSTeK has infringed and continues to directly infringe the '177 Patent by making, using, selling, offering for sale in, and/or importing into the United States the Accused Products, including but not limited to the ProArt Monitor which uses the infringing OLED display supplied by JOLED, in violation of 35 U.S.C. § 271 without the permission, consent, authorization, or license of Plaintiff.

27. For example, upon information and belief, ASUSTeK has infringed and continues to directly infringe at least claim 1 of the '177 Patent by making, using, selling, offering for sale, and/or importing in or into the United States the ProArt Monitor which incorporates OLED displays manufactured and supplied by JOLED.

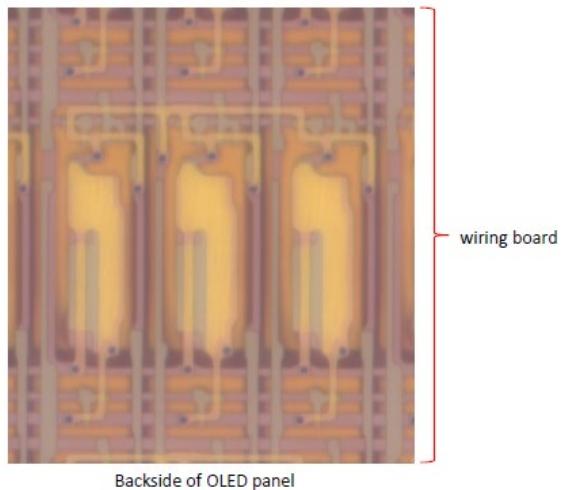
28. Independent claim 1 of the '177 Patent recites:

A wiring board comprising:

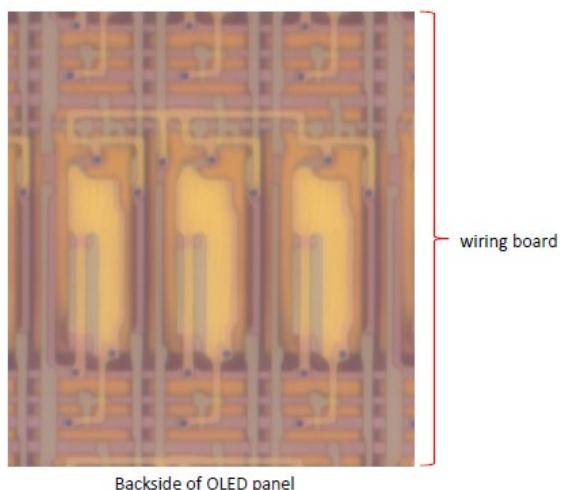
- a substrate;
- an interconnect layer formed of a plurality of layers, the interconnect layer being formed over the substrate, the plurality of layers being formed one over another at different levels in a thickness direction of the substrate, one of the plurality of layers having an interconnecting pattern positioned therein, the interconnecting pattern having at least three interconnecting lines disposed parallel to each other; and
- a plurality of electrodes formed to overlap the interconnect layer;
- wherein a part of a first interconnecting pattern and a part of a second interconnecting pattern are disposed to extend in directions forming a lattice under each of the electrodes, the first interconnecting pattern being positioned in a first layer among the plurality of layers forming the interconnect layer, the second interconnecting pattern being positioned in a second layer among the plurality of layers forming the interconnect layer.

29. Upon information and belief, ASUSTeK's ProArt Monitor, which incorporates an OLED display supplied by JOLED, meets each of the limitations of claim 1 as listed above.

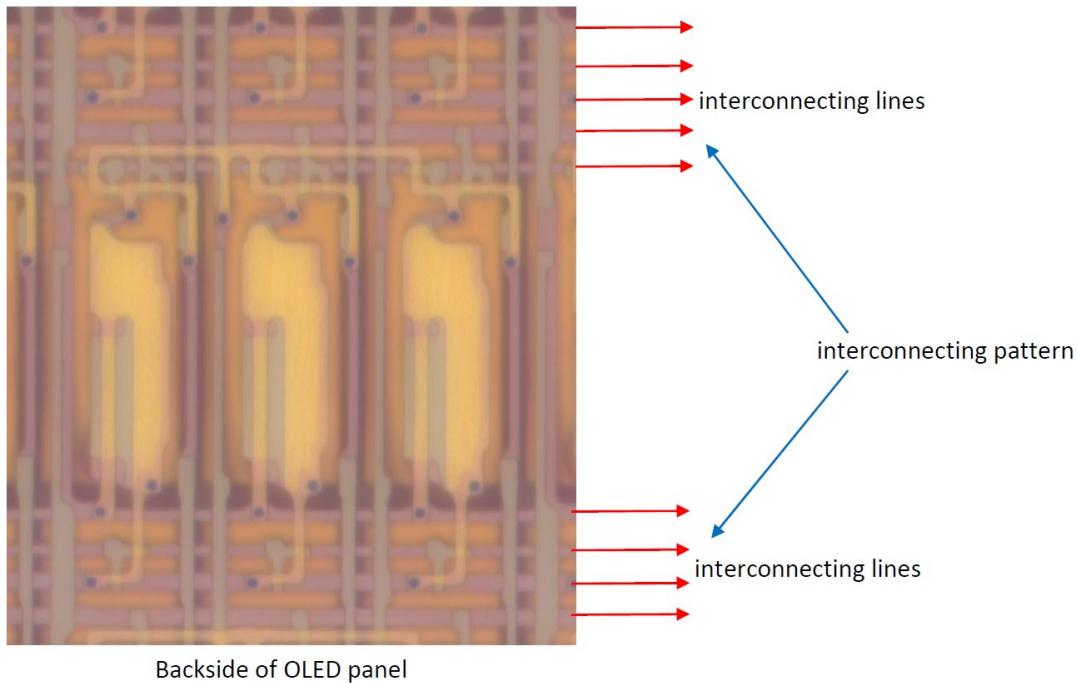
30. For example, ASUSTeK's ProArt Monitor includes a wiring board having a substrate as required by claim 1 of the '177 Patent. For example, as shown in the annotated image below, the Accused Products include a wiring board that has a substrate.



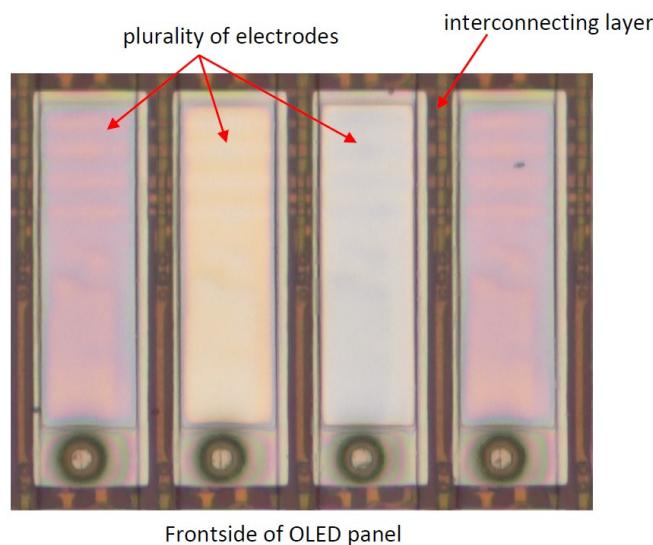
31. As recited in claim 1 of the '177 Patent, ASUSTeK's ProArt monitor includes an interconnect layer formed of a plurality of layers, the interconnect layer being formed over the substrate, the plurality of layers being formed one over another at different levels in a thickness direction of the substrate, as shown in the annotated image below.



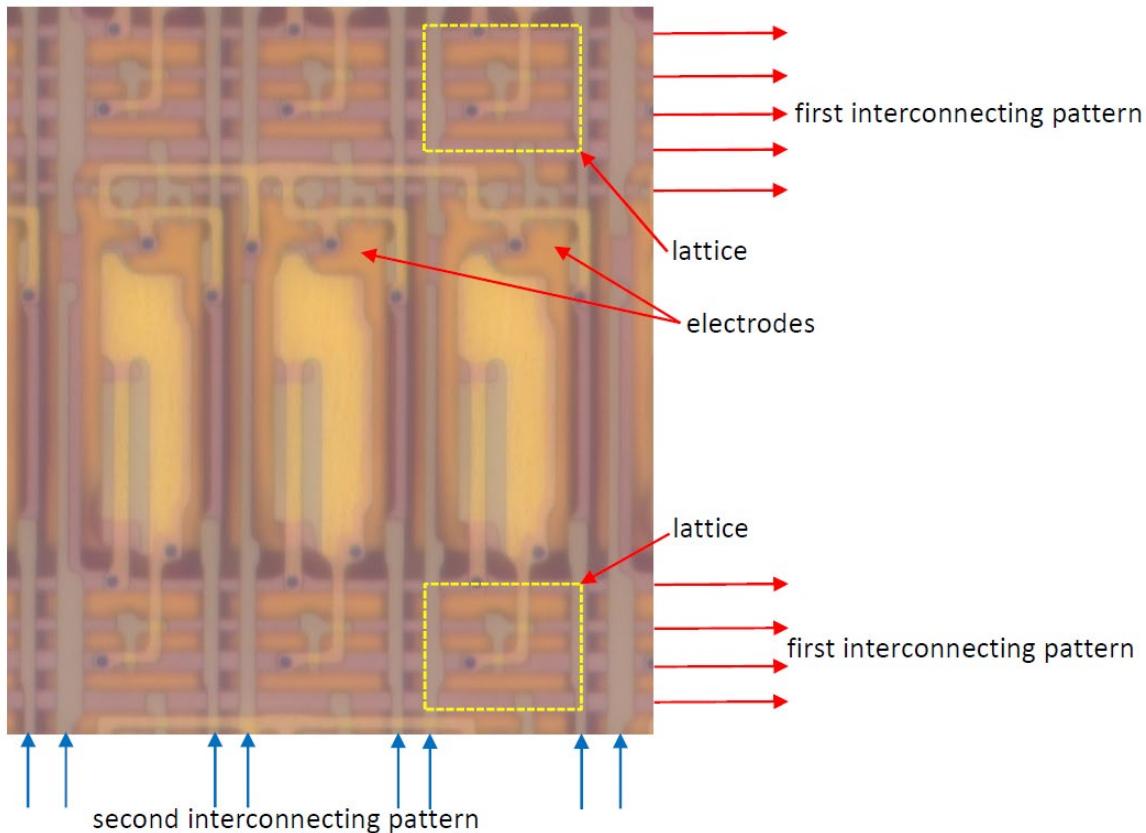
32. As recited in claim 1 of the '177 Patent, ASUSTeK's ProArt monitor includes an interconnect layer where one of the plurality of layers has an interconnecting pattern positioned therein, the interconnecting pattern having at least three interconnecting lines disposed parallel to each other, as shown in the annotated image below.



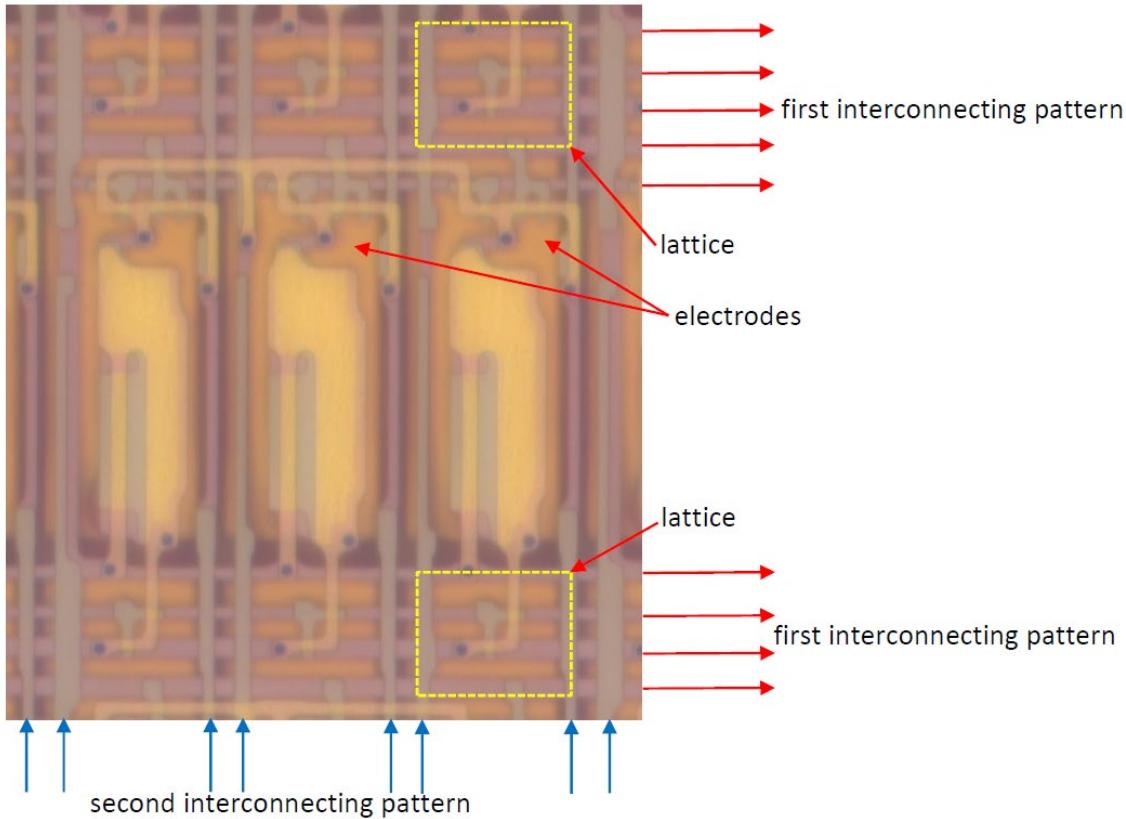
33. Moreover, ASUSTeK's ProArt monitor includes a plurality of electrodes formed to overlap the interconnect layer, as shown in the annotated image below.



34. ASUSTeK's ProArt Monitor also includes a part of a first interconnecting pattern and a part of a second interconnecting pattern that are disposed to extend in directions forming a lattice under each of the electrodes, as shown in the annotated image below.



35. Moreover, in ASUSTeK's ProArt Monitor, the first interconnecting pattern is positioned in a first layer among the plurality of layers forming the interconnect layer and the second interconnecting pattern is positioned in a second layer among the plurality of layers forming the interconnect layer, as shown in the annotated image below.



36. Upon information and belief, and as shown above in the example of ASUSTeK's ProArt Monitor, the Accused Products incorporate every limitation of at least claim 1 of the '177 Patent.

37. By making, using, selling, offering for sale in, and/or importing into the United States the Accused Products, including ASUSTeK's ProArt Monitor, Defendant ASUSTeK directly infringes at least claim 1 of the '177 Patent.

38. As a result of ASUSTeK's infringement of the '177 Patent, Plaintiff has and will continue to suffer irreparable harm.

COUNT II - INFRINGEMENT OF THE '943 PATENT

39. Plaintiff hereby incorporates the allegations of Paragraphs 1 through 38 as fully set forth herein.

40. Upon information and belief, Defendant ASUSTeK has infringed and continues to directly infringe the '943 Patent by making, using, selling, offering for sale in, and/or importing into the United States the Accused Products, including but not limited to the ProArt Monitor which uses the infringing OLED display supplied by JOLED, in violation of 35 U.S.C. § 271 without the permission, consent, authorization, or license of Plaintiff.

41. For example, upon information and belief, ASUSTeK has infringed and continues to directly infringe at least claim 1 of the '943 Patent by making, using, selling, offering for sale, and/or importing in or into the United States the ProArt Monitor which incorporates OLED displays manufactured and supplied by JOLED.

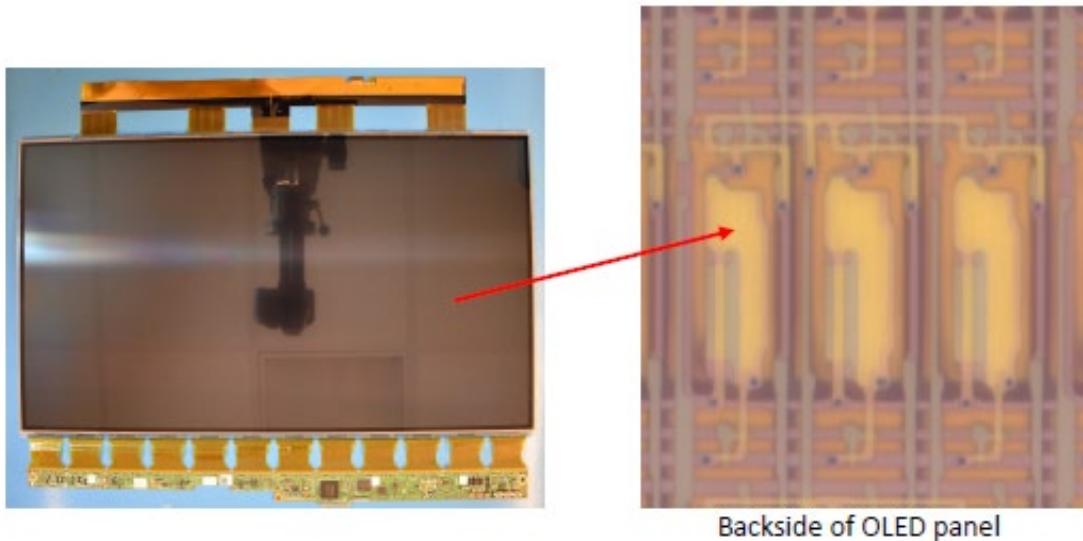
42. Independent claim 1 of the '943 Patent recites:

An electro-optical device, comprising:

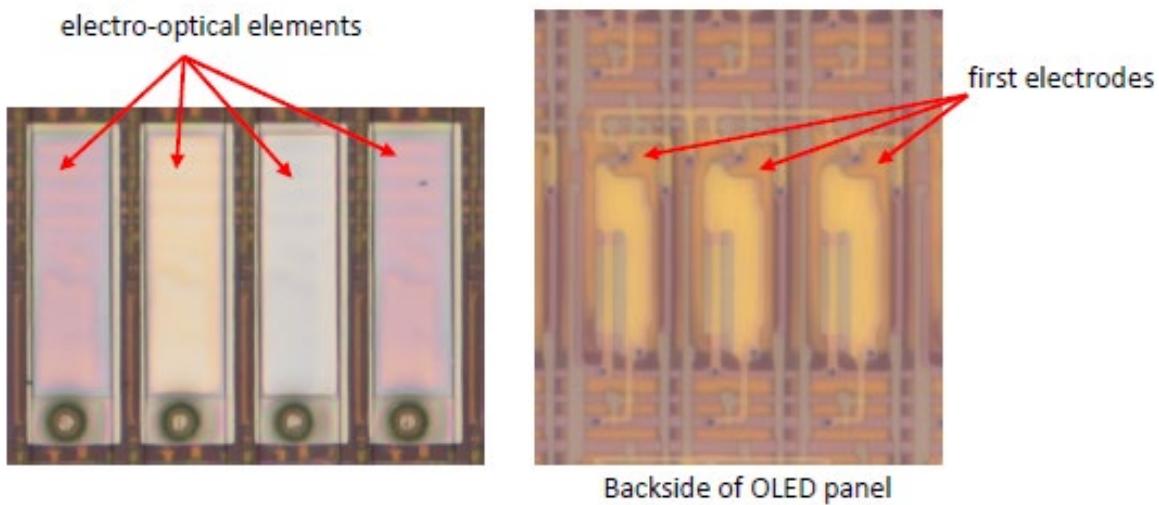
- a substrate;
- first electrodes disposed in an effective region on the substrate;
- a second electrode commonly formed to oppose the first electrodes;
- electro-optical elements, each of the electro-optical elements being interposed between the opposing one of the first electrodes and the second electrode;
- a first wiring line electrically coupled to at least one of the first electrodes; and
- a second wiring line coupled to the second electrode,
- the first wiring line including a first portion and a second portion, the first portion being disposed between the substrate and the second portion.

43. Upon information and belief, ASUSTeK's ProArt Monitor, which incorporates an OLED display supplied by JOLED, meets each of the limitations of claim 1 as listed above.

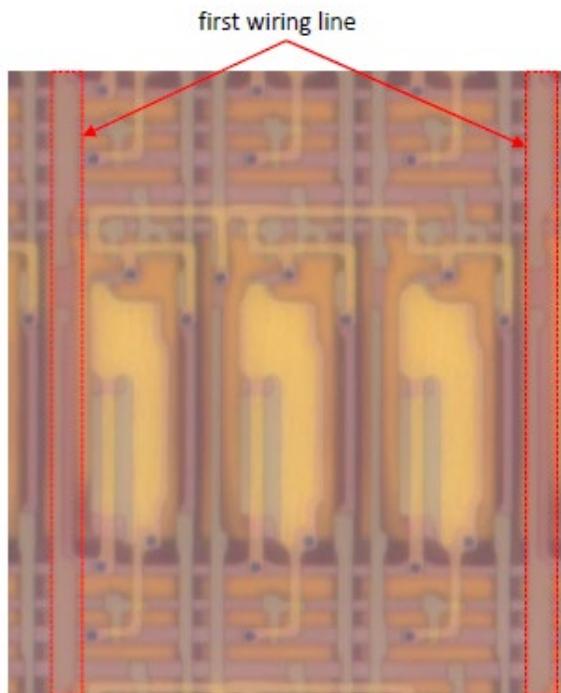
44. For example, ASUSTeK's ProArt Monitor includes an electro-optical device having a substrate as required by claim 1 of the '943 Patent, as shown in the annotated images below.



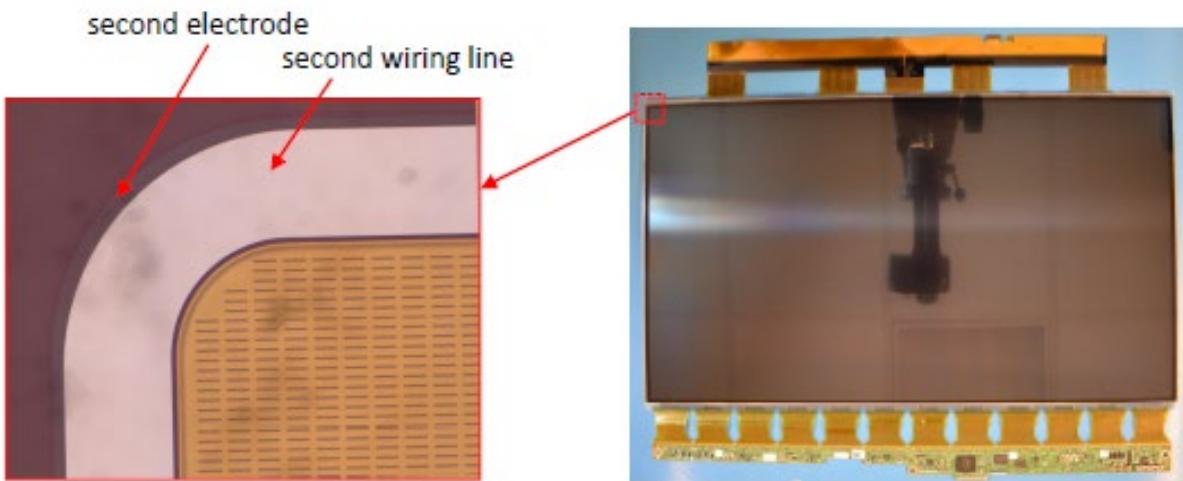
45. As recited in claim 1 of the '943 Patent, ASUSTeK's ProArt monitor includes first electrodes disposed in an effective region on the substrate, a second electrode commonly formed to oppose the first electrodes, and electro-optical elements, each of the electro-optical elements being interposed between the opposing one of the first electrodes and the second electrode, as shown in the annotated images below. The red, green, and blue electro-optical elements (i.e., pixels) are each interposed between respective first electrodes and a common second electrode.



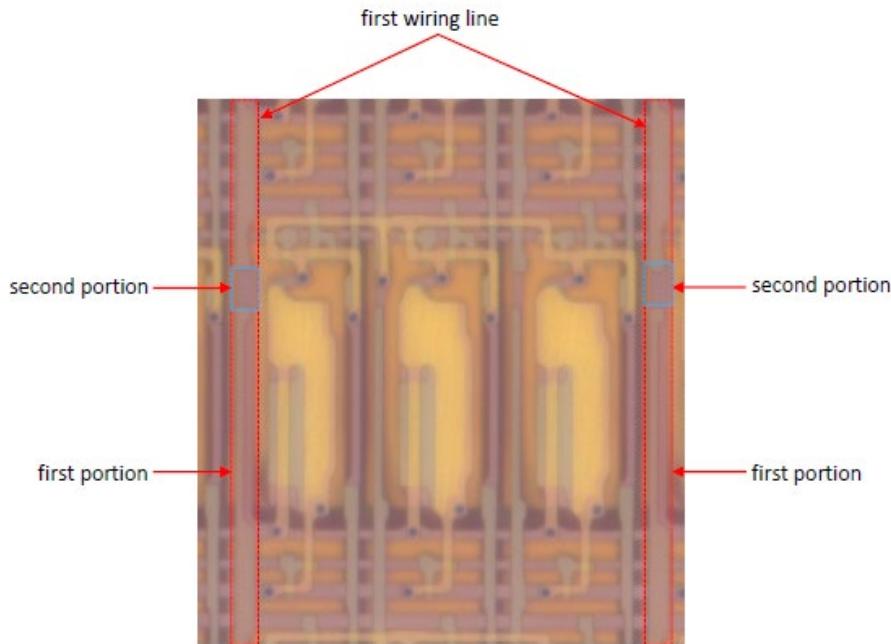
46. ASUSTeK's ProArt Monitor further includes a first wiring line electrically coupled to at least one of the first electrodes, as shown in the annotated image below.



47. Moreover, as recited in claim 1 of the '943 Patent, ASUSTeK's ProArt monitor includes a second wiring line coupled to the second electrode, as shown in the annotated images below.



48. In addition, the first wiring line in ASUSTeK's ProArt monitor includes a first portion and a second portion, the first portion being disposed between the substrate and the second portion, as shown in the annotated image below.



49. Upon information and belief, and as shown above in the example of ASUSTeK's ProArt Monitor, the Accused Products incorporate every limitation of at least claim 1 of the '943 Patent.

50. By making, using, selling, offering for sale in, and/or importing into the United States the Accused Products, including ASUSTeK's ProArt Monitor, Defendant ASUSTeK directly infringes at least claim 1 of the '943 Patent.

51. As a result of ASUSTeK's infringement of the '943 Patent, Plaintiff has and will continue to suffer irreparable harm.

COUNT III - INFRINGEMENT OF THE '190 PATENT

52. Plaintiff hereby incorporates the allegations of Paragraphs 1 through 51 as fully set forth herein.

53. Upon information and belief, Defendant ASUSTeK has infringed and continues to directly infringe the '190 Patent by making, using, selling, offering for sale in, and/or importing into the United States the Accused Products, including but not limited to the ProArt Monitor which uses the infringing OLED display supplied by JOLED, in violation of 35 U.S.C. § 271 without the permission, consent, authorization, or license of Plaintiff.

54. For example, upon information and belief, ASUSTeK has infringed and continues to directly infringe at least claim 1 of the '190 Patent by making, using, selling, offering for sale, and/or importing in or into the United States the ProArt Monitor which incorporates OLED displays manufactured and supplied by JOLED.

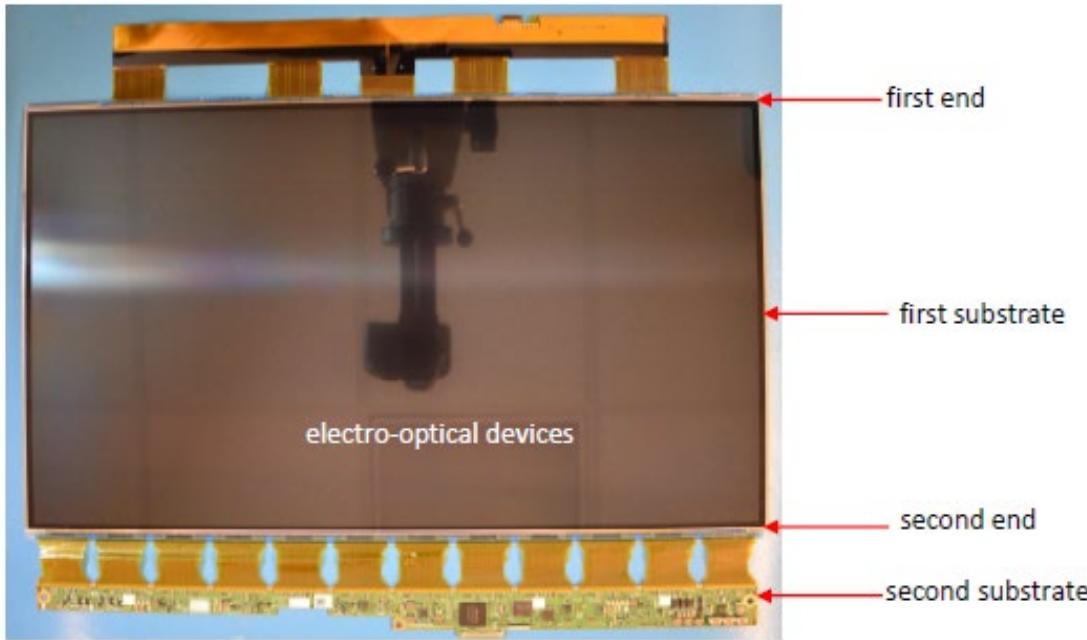
55. Independent claim 1 of the '190 Patent recites:

An electro-optical device, comprising:

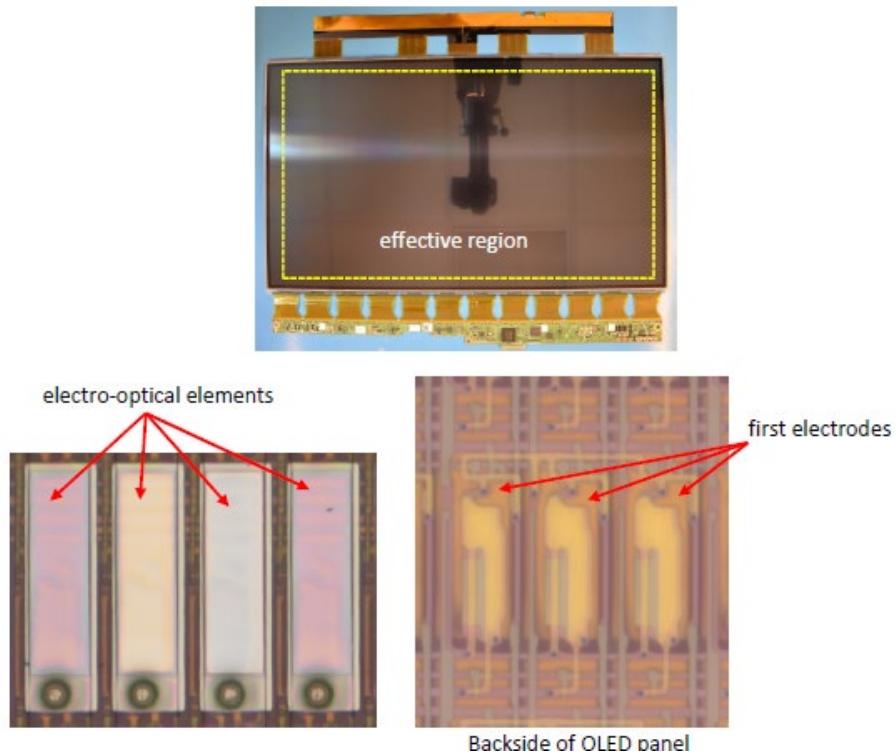
- a first substrate having a first end and a second end opposite from each other;
- a plurality of first electrodes disposed in an effective region on the first substrate;
- a second electrode acting as a common electrode for the plurality of first electrodes;
- a plurality of electro-optical elements, each being disposed between the second electrode and a corresponding one of the first electrodes;
- first wiring lines to supply respective driving currents to the first electrodes;
- a second wiring line connected to the second electrode, at least a part of the second wiring line being disposed between the effective region and the first end of the first substrate;
- a second substrate provided at the second end of the first substrate; and
- a control integrated circuit mounted on the second substrate, the control integrated circuit including a luminescent power-supply circuit electrically connected to the first wiring lines.

56. Upon information and belief, ASUSTeK's ProArt Monitor, which incorporates an OLED display supplied by JOLED, meets each of the limitations of claim 1 as listed above.

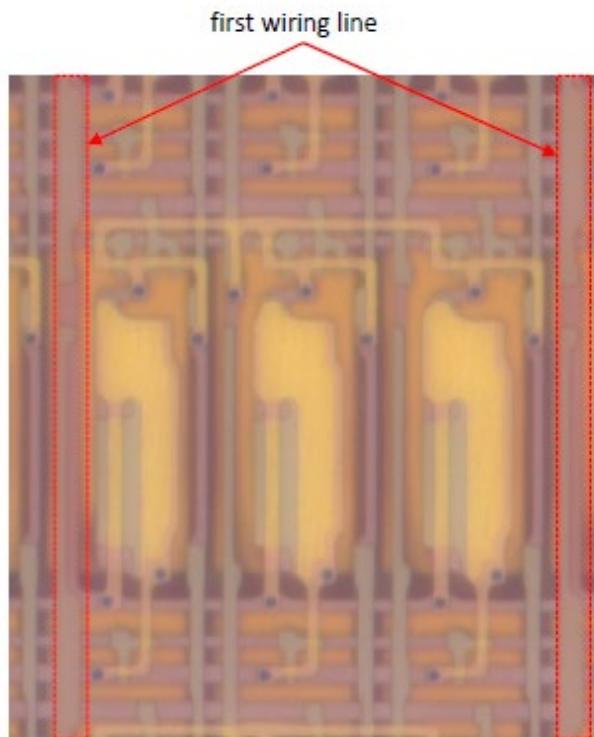
57. For example, ASUSTeK's ProArt Monitor includes an electro-optical device having a first substrate having a first end and a second end opposite from each other as required by claim 1 of the '190 Patent, as shown in the annotated image below.



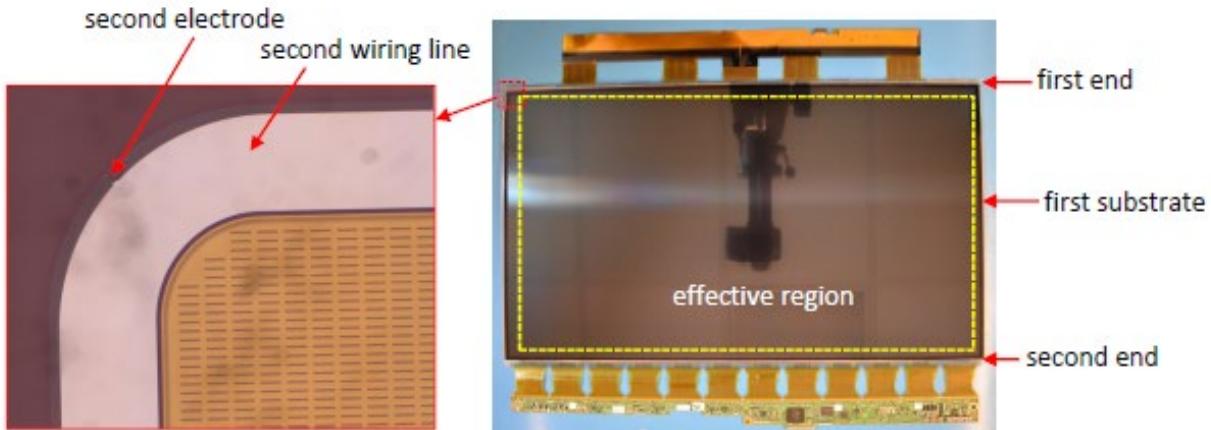
58. Moreover, as recited in claim 1 of the '190 Patent, ASUSTeK's ProArt Monitor includes a plurality of first electrodes disposed in an effective region on the first substrate, a second electrode acting as a common electrode for the plurality of first electrodes, and a plurality of electro-optical elements, each being disposed between the second electrode and a corresponding one of the first electrodes, as shown in the annotated images below.



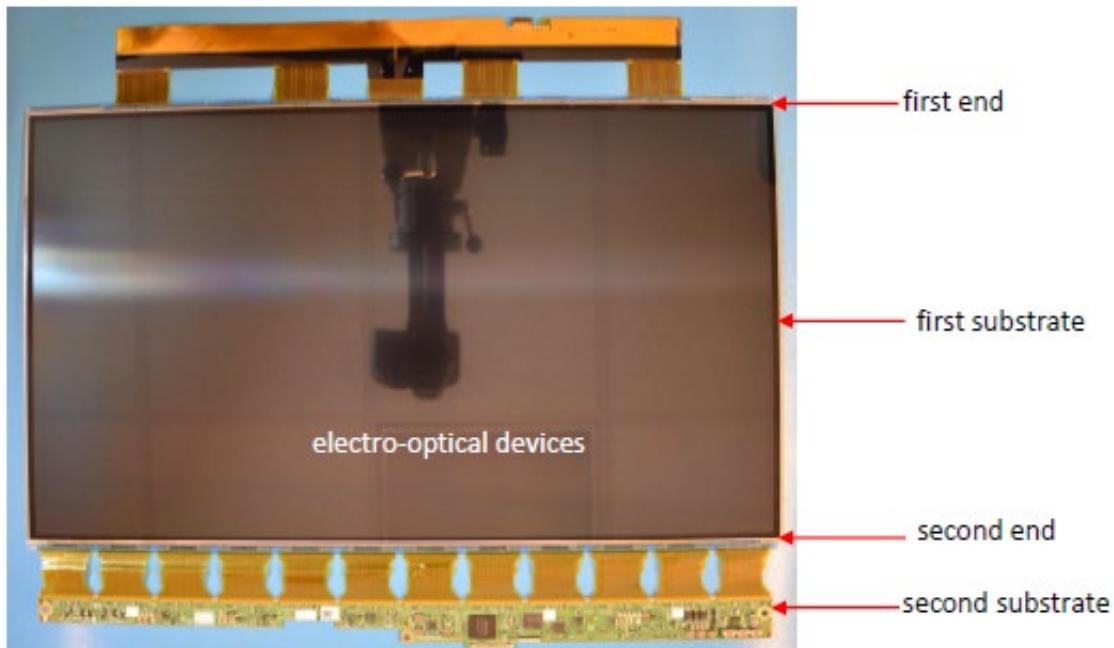
59. ASUSTeK's ProArt Monitor also includes first wiring lines to supply respective driving currents to the first electrodes, as shown in the annotated image below.



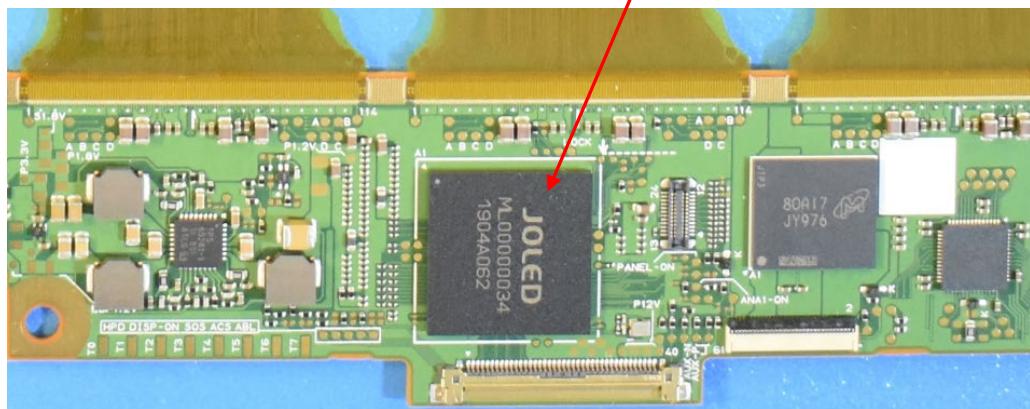
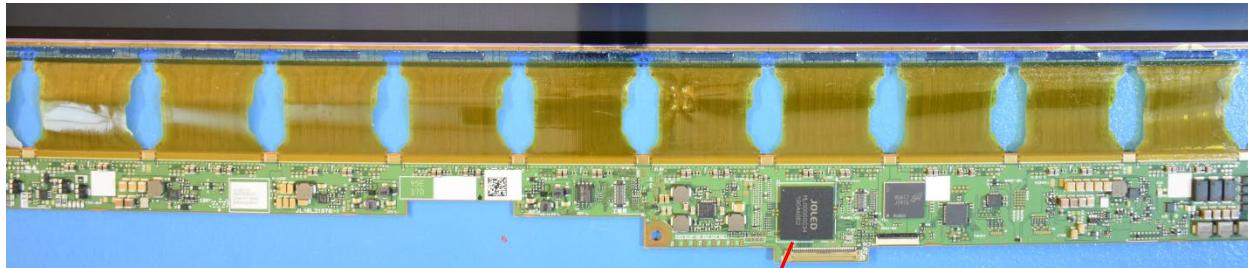
60. ASUSTeK's ProArt Monitor also includes a second wiring line connected to the second electrode, at least a part of the second wiring line being disposed between the effective region and the first end of the first substrate, as shown in the annotated images below.



61. As recited in claim 1 of the '190 Patent, ASUSTeK's ProArt Monitor further includes a second substrate provided at the second end of the first substrate, as shown in the annotated image below.



62. Upon information and belief, ASUSTeK's ProArt Monitor further includes a control integrated circuit mounted on the second substrate, the control integrated circuit including a luminescent power-supply circuit electrically connected to the first wiring lines, as shown in the annotated images below.



63. Upon information and belief, and as shown above in the example of ASUSTeK's ProArt Monitor, the Accused Products incorporate every limitation of at least claim 1 of the '190 Patent.

64. By making, using, selling, offering for sale in, and/or importing into the United States the Accused Products, including ASUSTeK's ProArt Monitor, Defendant ASUSTeK directly infringes at least claim 1 of the '190 Patent.

65. As a result of ASUSTeK's infringement of the '190 Patent, Plaintiff has and will continue to suffer irreparable harm.

ADDITIONAL ALLEGATIONS REGARDING INDIRECT INFRINGEMENT

INDIRECT INFRINGEMENT OF U.S. PATENT NO. 7,342,177

66. Defendants have had knowledge of the '177 Patent at least since the filing of this action.

67. Upon information and belief, at least as of the filing date of this Complaint and with knowledge of the '177 Patent, Defendants are infringing the '177 Patent under 35 U.S.C. § 271(b) by knowingly and intentionally inducing others to directly infringe the '177 Patent. For example, upon information and belief, Defendants induce end-users to directly infringe (literally and/or under the doctrine of equivalents) the '177 Patent by using the Accused Products, including ASUSTeK's ProArt Monitor, in the United States. Upon information and belief, Defendants take active steps, directly and/or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes at least claim 1 of the '177 Patent. Upon information and belief, Defendants are performing these steps, which constitute induced infringement with the knowledge of the '177 Patent and with the knowledge that the induced acts constitute infringement. Upon information and belief, Defendants are aware that the normal and customary use of the Accused Products by Defendants' customers would infringe the '177 Patent. Defendants' inducement is ongoing.

68. Upon information and belief, at least as of the filing date of this Complaint and with knowledge of the '177 Patent, Defendants have also induced their affiliates and/or third-party manufacturers, shippers, distributors, retailers, or other persons acting on their or their affiliates' behalf, to directly infringe (literally and/or under the doctrine of equivalents) the '177 Patent by importing into the United States and selling or offering to sell in the United States the Accused Products, including ASUSTeK's ProArt Monitor. Upon information and belief,

Defendants take active steps, directly and/or through contractual relationships with others, with the specific intent to cause such persons to import, sell, or offer to sell the Accused Products in a manner that infringes at least claim 1 of the '177 Patent. Upon information and belief, such steps by Defendants include, among other things, making or selling the Accused Products, including ASUSTeK's ProArt Monitor, outside of the United States for importation into or sale in the United States, knowing that such importation or sale would occur; and directing, facilitating, or influencing ASUSTeK's affiliates or third party manufacturers, shippers, distributors, retailers, or other persons acting on its or their behalf, to import, sell, or offer to sell the Accused Products in an infringing manner. Defendants perform these steps, which constitute induced infringement, with the knowledge of the '177 Patent and with the knowledge that the induced acts would constitute infringement. Defendants perform such steps in order to profit from the eventual sale of the accused products in the United States. Defendants' inducement is ongoing.

69. Upon information and belief, at least as of the filing date of this Complaint and with knowledge of the '177 Patent, JOLED has been knowingly selling OLED displays to ASUSTeK, which has incorporated, and continues to incorporate, such OLED displays into products including the ProArt Monitor, thereby causing ASUSTeK to directly infringe under 35 U.S.C. § 271(a) at least claim 1 of the '177 Patent.

70. Upon information and belief, JOLED's OLED displays, including the OLED display used in the Accused Products such as ASUSTeK's ProArt Monitor, have no substantial non-infringing uses. JOLED's OLED displays are specially designed and have special features that result in infringing use and have no substantial uses other than ones that infringe the '177 Patent.

71. In particular, JOLED's OLED displays include a substrate; an interconnect layer formed of a plurality of layers, the interconnect layer being formed over the substrate, the plurality of layers being formed one over another at different levels in a thickness direction of the substrate, one of the plurality of layers having an interconnecting pattern positioned therein, the interconnecting pattern having at least three interconnecting lines disposed parallel to each other; and a plurality of electrodes formed to overlap the interconnect layer; wherein a part of a first interconnecting pattern and a part of a second interconnecting pattern are disposed to extend in directions forming a lattice under each of the electrodes, the first interconnecting pattern being positioned in a first layer among the plurality of layers forming the interconnect layer, the second interconnecting pattern being positioned in a second layer among the plurality of layers forming the interconnect layer.

72. Upon information and belief, despite their knowledge of the '177 Patent, Defendants are intentionally marketing infringing products, including ASUSTeK's ProArt Monitor, and making recommendations for such products to customers (including through ASUS's US website, <https://www.asus.com/us/Monitors/ProArt-PQ22UC/overview/>); relaying customer demands for new infringing monitors to its research and development team; providing technical training to resellers and distributors; and providing product design support, prototypes, and technical assistance to customers during the life cycle of infringing monitors. Upon information and belief, Defendants have actively encouraged and continue to actively encourage direct infringement of the '177 Patent by their affiliates, third-party manufacturers, shippers, distributors, retailers, or other persons acting on their or their affiliates' behalf through product design support, prototypes, marketing, and technical assistance.

73. Upon information and belief, JOLED has been and continues to contributorily infringe under 35 U.S.C. § 271(c) at least claim 1 of the '177 Patent.

74. Upon information and belief, JOLED has been knowingly selling OLED displays to ASUSTeK, which has incorporated, and continues to incorporate, such OLED displays into other infringing products, thereby causing ASUSTeK to directly infringe under 35 U.S.C. § 271(a) at least claim 1 of the '177 Patent. Upon information and belief, JOLED's OLED displays have no substantial non-infringing uses.

75. In particular, JOLED's OLED displays include a substrate; an interconnect layer formed of a plurality of layers, the interconnect layer being formed over the substrate, the plurality of layers being formed one over another at different levels in a thickness direction of the substrate, one of the plurality of layers having an interconnecting pattern positioned therein, the interconnecting pattern having at least three interconnecting lines disposed parallel to each other; and a plurality of electrodes formed to overlap the interconnect layer; wherein a part of a first interconnecting pattern and a part of a second interconnecting pattern are disposed to extend in directions forming a lattice under each of the electrodes, the first interconnecting pattern being positioned in a first layer among the plurality of layers forming the interconnect layer, the second interconnecting pattern being positioned in a second layer among the plurality of layers forming the interconnect layer.

76. Upon information and belief, the OLED displays that JOLED has sold and/or provided to downstream parties, including at least ASUSTeK, embody a material part of the claimed invention of the '177 Patent, and infringe at least claim 1 of the '177 Patent. ASUSTeK has incorporated, and continues to incorporate, the OLED displays into at least the ProArt Monitor. By contributing a material part of the Accused Products which are made, used, sold,

offered for sale in, and/or imported into the United States, JOLED has been and is now indirectly infringing the '177 Patent.

77. Upon information and belief, ASUSTeK has been and is now directly infringing at least claim 1 of the '177 Patent by making, using, selling, offering to sell, and/or importing monitors containing JOLED's OLED displays, in or into the United States.

INDIRECT INFRINGEMENT OF U.S. PATENT NO. 7,439,943

78. Defendants have had knowledge of the '943 Patent at least since the filing of this action.

79. Upon information and belief, at least as of the filing date of this Complaint and with knowledge of the '943 Patent, Defendants are infringing the '943 Patent under 35 U.S.C. § 271(b) by knowingly and intentionally inducing others to directly infringe the '943 Patent. For example, upon information and belief, Defendants induce end-users to directly infringe (literally and/or under the doctrine of equivalents) the '943 Patent by using the Accused Products, including ASUSTeK's ProArt Monitor, in the United States. Upon information and belief, Defendants take active steps, directly and/or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes at least claim 1 of the '943 Patent. Upon information and belief, Defendants are performing these steps, which constitute induced infringement with the knowledge of the '943 Patent and with the knowledge that the induced acts constitute infringement. Upon information and belief, Defendants are aware that the normal and customary use of the Accused Products by Defendants' customers would infringe the '943 Patent. Defendants' inducement is ongoing.

80. Upon information and belief, at least as of the filing date of this Complaint and with knowledge of the '943 Patent, Defendants have also induced their affiliates and/or third-party manufacturers, shippers, distributors, retailers, or other persons acting on their or their

affiliates' behalf, to directly infringe (literally and/or under the doctrine of equivalents) the '943 Patent by importing into the United States and selling or offering to sell in the United States the Accused Products, including ASUSTeK's ProArt Monitor. Upon information and belief, Defendants take active steps, directly and/or through contractual relationships with others, with the specific intent to cause such persons to import, sell, or offer to sell the Accused Products in a manner that infringes at least claim 1 of the '943 Patent. Upon information and belief, such steps by Defendants include, among other things, making or selling the Accused Products, including ASUSTeK's ProArt Monitor, outside of the United States for importation into or sale in the United States, knowing that such importation or sale would occur; and directing, facilitating, or influencing ASUSTeK's affiliates or third party manufacturers, shippers, distributors, retailers, or other persons acting on its or their behalf, to import, sell, or offer to sell the Accused Products in an infringing manner. Defendants perform these steps, which constitute induced infringement, with the knowledge of the '943 Patent and with the knowledge that the induced acts would constitute infringement. Defendants perform such steps in order to profit from the eventual sale of the accused products in the United States. Defendants' inducement is ongoing.

81. Upon information and belief, at least as of the filing date of this Complaint and with knowledge of the '943 Patent, JOLED has been knowingly selling OLED displays to ASUSTeK, which has incorporated, and continues to incorporate, such OLED displays into products including the ProArt Monitor, thereby causing ASUSTeK to directly infringe under 35 U.S.C. § 271(a) at least claim 1 of the '943 Patent.

82. Upon information and belief, JOLED's OLED displays, including the OLED display used in the Accused Products such as ASUSTeK's ProArt Monitor, have no substantial non-infringing uses. JOLED's OLED displays are specially designed and have special features

that result in infringing use and have no substantial uses other than ones that infringe the '943 Patent.

83. In particular, JOLED's OLED displays include a substrate; first electrodes disposed in an effective region on the substrate; a second electrode commonly formed to oppose the first electrodes; electro-optical elements, each of the electro-optical elements being interposed between the opposing one of the first electrodes and the second electrode; a first wiring line electrically coupled to at least one of the first electrodes; and a second wiring line coupled to the second electrode, the first wiring line including a first portion and a second portion, the first portion being disposed between the substrate and the second portion.

84. Upon information and belief, despite their knowledge of the '943 Patent, Defendants are intentionally marketing infringing products, including ASUSTeK's ProArt Monitor, and making recommendations for such products to customers (including through ASUS's US website, <https://www.asus.com/us/Monitors/ProArt-PQ22UC/overview/>); relaying customer demands for new infringing monitors to its research and development team; providing technical training to resellers and distributors; and providing product design support, prototypes, and technical assistance to customers during the life cycle of infringing monitors. Upon information and belief, Defendants have actively encouraged and continue to actively encourage direct infringement of the '943 Patent by their affiliates, third-party manufacturers, shippers, distributors, retailers, or other persons acting on their or their affiliates' behalf through product design support, prototypes, marketing, and technical assistance.

85. Upon information and belief, JOLED has been and continues to contributorily infringe under 35 U.S.C. § 271(c) at least claim 1 of the '943 Patent.

86. Upon information and belief, JOLED has been knowingly selling OLED displays to ASUSTeK, which has incorporated, and continues to incorporate, such OLED displays into other infringing products, thereby causing ASUSTeK to directly infringe under 35 U.S.C. § 271(a) at least claim 1 of the '943 Patent. Upon information and belief, JOLED's OLED displays have no substantial non-infringing uses.

87. In particular, JOLED's OLED displays include a substrate; first electrodes disposed in an effective region on the substrate; a second electrode commonly formed to oppose the first electrodes; electro-optical elements, each of the electro-optical elements being interposed between the opposing one of the first electrodes and the second electrode; a first wiring line electrically coupled to at least one of the first electrodes; and a second wiring line coupled to the second electrode, the first wiring line including a first portion and a second portion, the first portion being disposed between the substrate and the second portion.

88. Upon information and belief, the OLED displays that JOLED has sold and/or provided to downstream parties, including at least ASUSTeK, embody a material part of the claimed invention of the '943 Patent, and infringe at least claim 1 of the '943 Patent. ASUSTeK has incorporated, and continues to incorporate, the OLED displays into at least the ProArt Monitor. By contributing a material part of the Accused Products which are made, used, sold, offered for sale in, and/or imported into the United States, JOLED has been and is now indirectly infringing the '943 Patent.

89. Upon information and belief, ASUSTeK has been and is now directly infringing at least claim 1 of the '943 Patent by making, using, selling, offering to sell, and/or importing monitors containing JOLED's OLED displays, in or into the United States.

INDIRECT INFRINGEMENT OF U.S. PATENT NO. 8,665,190

90. Defendants have had knowledge of the '190 Patent at least since the filing of this action.

91. Upon information and belief, at least as of the filing date of this Complaint and with knowledge of the '190 Patent, Defendants are infringing the '190 Patent under 35 U.S.C. § 271(b) by knowingly and intentionally inducing others to directly infringe the '190 Patent. For example, upon information and belief, Defendants induce end-users to directly infringe (literally and/or under the doctrine of equivalents) the '190 Patent by using the Accused Products, including ASUSTeK's ProArt Monitor, in the United States. Upon information and belief, Defendants take active steps, directly and/or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes at least claim 1 of the '190 Patent. Upon information and belief, Defendants are performing these steps, which constitute induced infringement with the knowledge of the '190 Patent and with the knowledge that the induced acts constitute infringement. Upon information and belief, Defendants are aware that the normal and customary use of the Accused Products by Defendants' customers would infringe the '190 Patent. Defendants' inducement is ongoing.

92. Upon information and belief, at least as of the filing date of this Complaint and with knowledge of the '190 Patent, Defendants have also induced their affiliates and/or third-party manufacturers, shippers, distributors, retailers, or other persons acting on their or their affiliates' behalf, to directly infringe (literally and/or under the doctrine of equivalents) the '190 Patent by importing into the United States and selling or offering to sell in the United States the Accused Products, including ASUSTeK's ProArt Monitor. Upon information and belief, Defendants take active steps, directly and/or through contractual relationships with others, with the specific intent to cause such persons to import, sell, or offer to sell the Accused Products in a

manner that infringes at least claim 1 of the '190 Patent. Upon information and belief, such steps by Defendants include, among other things, making or selling the Accused Products, including ASUSTeK's ProArt Monitor, outside of the United States for importation into or sale in the United States, knowing that such importation or sale would occur; and directing, facilitating, or influencing ASUSTeK's affiliates or third party manufacturers, shippers, distributors, retailers, or other persons acting on its or their behalf, to import, sell, or offer to sell the Accused Products in an infringing manner. Defendants perform these steps, which constitute induced infringement, with the knowledge of the '190 Patent and with the knowledge that the induced acts would constitute infringement. Defendants perform such steps in order to profit from the eventual sale of the accused products in the United States. Defendants' inducement is ongoing.

93. Upon information and belief, at least as of the filing date of this Complaint and with knowledge of the '190 Patent, JOLED has been knowingly selling OLED displays to ASUSTeK, which has incorporated, and continues to incorporate, such OLED displays into products including the ProArt Monitor, thereby causing ASUSTeK to directly infringe under 35 U.S.C. § 271(a) at least claim 1 of the '190 Patent.

94. Upon information and belief, JOLED's OLED displays, including the OLED display used in the Accused Products such as ASUSTeK's ProArt Monitor, have no substantial non-infringing uses. JOLED's OLED displays are specially designed and have special features that result in infringing use and have no substantial uses other than ones that infringe the '190 Patent.

95. In particular, JOLED's OLED displays include a first substrate having a first end and a second end opposite from each other; a plurality of first electrodes disposed in an effective region on the first substrate; a second electrode acting as a common electrode for the plurality of

first electrodes; a plurality of electro-optical elements, each being disposed between the second electrode and a corresponding one of the first electrodes; first wiring lines to supply respective driving currents to the first electrodes; a second wiring line connected to the second electrode, at least a part of the second wiring line being disposed between the effective region and the first end of the first substrate; a second substrate provided at the second end of the first substrate; and a control integrated circuit mounted on the second substrate, the control integrated circuit including a luminescent power-supply circuit electrically connected to the first wiring lines.

96. Upon information and belief, despite their knowledge of the '190 Patent, Defendants are intentionally marketing infringing products, including ASUSTeK's ProArt Monitor, and making recommendations for such products to customers (including through ASUS's US website, <https://www.asus.com/us/Monitors/ProArt-PQ22UC/overview/>); relaying customer demands for new infringing monitors to its research and development team; providing technical training to resellers and distributors; and providing product design support, prototypes, and technical assistance to customers during the life cycle of infringing monitors. Upon information and belief, Defendants have actively encouraged and continue to actively encourage direct infringement of the '190 Patent by their affiliates, third-party manufacturers, shippers, distributors, retailers, or other persons acting on their or their affiliates' behalf through product design support, prototypes, marketing, and technical assistance.

97. Upon information and belief, JOLED has been and continues to contributorily infringe under 35 U.S.C. § 271(c) at least claim 1 of the '190 Patent.

98. Upon information and belief, JOLED has been knowingly selling OLED displays to ASUSTeK, which has incorporated, and continues to incorporate, such OLED displays into other infringing products, thereby causing ASUSTeK to directly infringe under 35 U.S.C.

§ 271(a) at least claim 1 of the '190 Patent. Upon information and belief, JOLED's OLED displays have no substantial non-infringing uses.

99. In particular, JOLED's OLED displays include a first substrate having a first end and a second end opposite from each other; a plurality of first electrodes disposed in an effective region on the first substrate; a second electrode acting as a common electrode for the plurality of first electrodes; a plurality of electro-optical elements, each being disposed between the second electrode and a corresponding one of the first electrodes; first wiring lines to supply respective driving currents to the first electrodes; a second wiring line connected to the second electrode, at least a part of the second wiring line being disposed between the effective region and the first end of the first substrate; a second substrate provided at the second end of the first substrate; and a control integrated circuit mounted on the second substrate, the control integrated circuit including a luminescent power-supply circuit electrically connected to the first wiring lines.

100. Upon information and belief, the OLED displays that JOLED has sold and/or provided to downstream parties, including at least ASUSTeK, embody a material part of the claimed invention of the '190 Patent, and infringe at least claim 1 of the '190 Patent. ASUSTeK has incorporated, and continues to incorporate, the OLED displays into at least the ProArt Monitor. By contributing a material part of the Accused Products which are made, used, sold, offered for sale in, and/or imported into the United States, JOLED has been and is now indirectly infringing the '190 Patent.

101. Upon information and belief, ASUSTeK has been and is now directly infringing at least claim 1 of the '190 Patent by making, using, selling, offering to sell, and/or importing monitors containing JOLED's OLED displays, in or into the United States.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff IKT prays for relief as follows:

- A. A judgment that each of the Defendants has infringed, directly or indirectly, the '177 Patent;
- B. A judgment that each of the Defendants has infringed, directly or indirectly, the '943 Patent;
- C. A judgment that each of the Defendants has infringed, directly or indirectly, the '190 Patent;
- D. A permanent injunction against Defendants, together with their subsidiaries, agents, officers, employees, directors, licensees, servants, successors, and assigns, from directly or indirectly infringing the Asserted Patents;
- E. Compensatory damages in an amount commensurate with Defendants' infringement of the Asserted Patents;
- F. Pre-judgment interest on all damages awarded to Plaintiff;
- G. Post-judgment interest on all sums awarded to Plaintiff from the date of the judgment;
- H. An award of reasonable attorneys' fees pursuant to 35 U.S.C. § 285; and
- I. Any and all other relief that the Court deems just and equitable.

JURY DEMAND

Pursuant to Rule 38(b) on the Federal Rules of Civil Procedure, Plaintiff hereby demands a jury trial on all issues raised by this complaint.

Dated: January 19, 2021

/s/ Barry K. Shelton

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